

## Office Action Summary

Application No.

10/848,740

Applicant(s)

MASUDA, ATSUSHI

Examiner

Usman Khan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

The information disclosure statement (IDS) submitted on 05/19/2004 has been considered by the examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mizumaki et al. (US patent No. 6,710,563).

Regarding **claim 1**, Mizumaki et al. teaches a shutter-driving device combined with a diaphragm (figure 1 item 7), comprising: a base member having a predetermined thickness (figure 1 item 4); an aperture having a predetermined diameter and formed

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through the base member (figure 1 item 9a or 5b); and a light-adjusting member closing the aperture or adjusting a degree of opening thereof by driving a driving source (figure 1 item 7), wherein an ND filter capable of adjusting a intensity of light that passes through the aperture is supported by the base member (figures 13 - 15 item 10), wherein movement of the ND filter is locked in a state where the aperture is not shielded when the light-adjusting member opens the aperture (figures 13 - 15 item 10), and wherein, in a state where the aperture is not shielded (figures 13 - 15 item 10), the locking of the ND filter is released in synchronization with the operation of the light-adjusting member of closing the aperture so as to shield the aperture (figures 13 - 15 item 10).

Claim 1 - 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Applicants Admitted Prior Art.

Regarding **claim 1**, Applicants Admitted Prior Art teaches a shutter-driving device combined with a diaphragm (figure 9 – 14; also in application PgPub paragraphs 0004 - 0019), comprising: a base member having a predetermined thickness (figures 9 – 14 items 51 and/or 52; also in application PgPub paragraphs 0004 – 0019); an aperture having a predetermined diameter and formed through the base member (figures 9 – 14 items 51a and/or 52a; also in application PgPub paragraphs 0004 – 0019); and a light-adjusting member closing the aperture or adjusting a degree of opening thereof by driving a driving source (figures 9 – 14 items 53a and/or 54a; also in application PgPub paragraphs 0004 – 0019), wherein an ND filter capable of adjusting a

intensity of light that passes through the aperture is supported by the base member (figure 10 and 12 and 14 item 59 and; also in application PgPub paragraphs 0004 – 0019), wherein movement of the ND filter is locked in a state where the aperture is not shielded when the light-adjusting member opens the aperture, and wherein, in a state where the aperture is not shielded, the locking of the ND filter is released in synchronization with the operation of the light-adjusting member of closing the aperture so as to shield the aperture (figures 9 – 14 items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 2**, as mentioned above in the discussion of claim 1 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches that the ND filter whose locking is released changes a degree of shielding the aperture in synchronization with movement of the light-adjusting member that adjusts the degree of opening the aperture (figures 9 – 14 items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 3**, as mentioned above in the discussion of claim 1 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches a ring-shaped driving ring that supports a part of the light-adjusting member so as to move freely is mounted on the base member, and wherein a plurality of the light-adjusting members move to positions in which the aperture is opened and to positions in which the aperture is closed in cooperation with

rotation of the driving ring (figures 9 – 14 items 55a and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 4**, as mentioned above in the discussion of claim 1 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches the ND filter is supported by a supporting member whose one end is supported by a part of the base member on an outer circumference of a driving ring so as to freely rotate, and wherein a locking member capable of locking movement of the supporting member in a state where the ND filter does not shield the aperture is arranged in a portion of the base member where the one end of the supporting member is positioned (figures 9 – 14 items 55a and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 5**, as mentioned above in the discussion of claim 4 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches that the supporting member is elastically biased by a first elastic member in a direction in which the ND filter shields the aperture and the locking member elastically biased by a second elastic member elastically contacts an end of the supporting member so that the ND filter in a state where the aperture is not shielded is locked (it is inherent that items 53a, 54a, 56, and 61 of figures 9 – 14 will be held in place with some elastic member, first for the ND filter 59, second for the light-adjusting members 53a and 54a).

Regarding **claim 6**, as mentioned above in the discussion of claim 5 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches that the biasing force of the second elastic member is larger than the biasing force of the first elastic member (Inherently the force required to hold the adjusting members 53a and 54a will be larger then the force to hold the ND filter 59).

Regarding **claim 7**, as mentioned above in the discussion of claim 4 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches that the locking of the supporting member by the locking member is released, the ND filter moves from a position in which the aperture is not shielded to a position in which the aperture is shielded by the biasing force of the first elastic member (figures 9 – 14 items 55a and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 8**, as mentioned above in the discussion of claim 4 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches an unlocking portion capable of rotating the driving ring in a direction in which the light-adjusting member closes the aperture so that the locked supporting member is pressed to release the locking of the supporting

member is formed in the driving ring (figures 9 – 14 items 55a and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 9**, as mentioned above in the discussion of claim 4 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches the supporting member rotates in synchronization with rotation of the driving ring in a direction in which the light-adjusting member opens the aperture so that the ND filter moves from a position in which the aperture is shielded to a position in which the aperture is not shielded (figures 9 – 14 items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019).

Regarding **claim 10**, as mentioned above in the discussion of claim 3 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches an operation pin capable of moving the ND filter from a state where the aperture is shielded to a position in which the aperture is not shielded against a biasing force of a first elastic member is formed in the driving ring (figures 9 – 14, including a plurality of pins to guide the ND filter, the adjusting members, and other components).

Regarding **claim 11**, as mentioned above in the discussion of claim 3 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches the driving source includes an electro-magnetic

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actuator, and wherein the driving ring rotates at a predetermined angle of rotation in cooperation with a reciprocating motion of a driving lever directly connected to the driving source in one direction and in another (figures 9 – 14 items 55, 55a, 60, and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019; 55 and 60 are electro-magnetic actuators).

Regarding **claim 12**, as mentioned above in the discussion of claim 11 Applicants Admitted Prior Art teaches all of the limitations of the parent claim. Additionally, Applicants Admitted Prior Art teaches wherein an engaging groove with which the driving lever engages is formed in the driving ring, wherein elongated holes with which protrusions formed in the driving ring engage are formed in the plurality of light-adjusting members, wherein the driving lever engaging with the engaging groove of the driving ring engages with the elongated hole of one of the light-adjusting members, and wherein the protrusions formed in the driving ring engage with the elongated holes of the remaining light-adjusting members (figures 9 – 14 items 55, 55a, 60, and 60a also items 51a, 52a, 53a, 54a, 59; also in application PgPub paragraphs 0004 – 0019; 55 and 60 are electro-magnetic actuators).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takayama et al. (US patent No. 6,639,629) teaches a moving ND filter into the light path.



Takanashi (US patent No. 7,025,513) teaches a moving ND filter into the light path.

Watanabe et al. (US patent No. 7,156,564) teaches a moving ND filter into the light path.

Mihara et al. (US PgPub 2002/0008920) teaches a moving ND filter into the light path.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

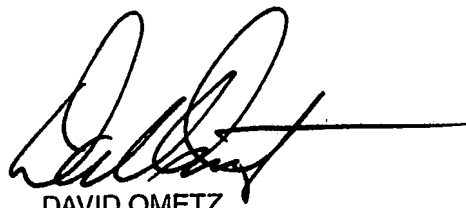
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan  
08/27/2007  
Patent Examiner  
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DAVID OMETZ  
SUPERVISORY PATENT EXAMINER